Developing Individual Human Exposure Estimates for Individual DBPs

Developing Exposure Estimates

Draft Final Report, Revision 1

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Notice

This is the final report of a three-task effort to model exposures to disinfection byproducts for a typical three-person US family. The research presented herein was compiled under the following tasks: Task 1, Identifying an Appropriate Mathematical Exposure Model and Developing Model Parameters; Task 2, Developing Individual Human Exposure Estimates; and Task 3, Report on Sensitivity and Uncertainty Analysis.

The study conducted and described in this report is meant to demonstrate route specific exposure and uptake of 15 relatively common disinfection byproducts. For many of the chemicals evaluated in this report, there are significant gaps in the understanding of the specific chemical parameters impacting exposure and uptake, such as the overall mass transfer coefficients, skin permeability rates and partition coefficients. In some cases the validity of these parameter estimates are not well understood. This document presents a combination of approaches based on best available data and methods, primarily from peer-reviewed publications. Any new data or advances in methods should be considered when using the results of this analysis.

Table of Contents

List of Tables

List of Figures